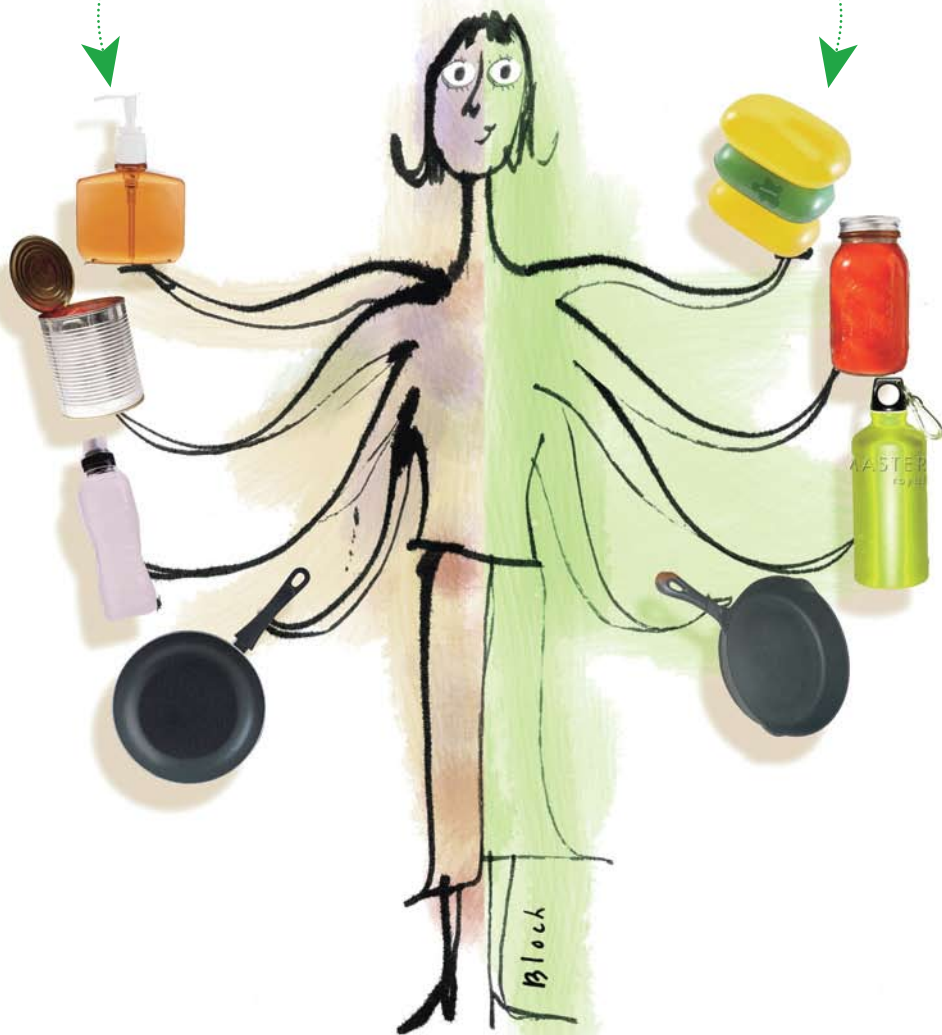


GREEN

THIS TO THAT





9

eco-smart swaps that will boost your health and protect the Earth, too

By Andreas von Bubnoff, PhD ■ Illustrations by Serge Bloch

We live in a chemical stew.

The average woman uses 12 different personal care products containing 168 different chemicals, according to a 2004 survey of more than 2,300 people by the Environmental Working Group (EWG)—and very few of them have been tested for safety. When you hang a new shower curtain, you may inhale 108 chemicals over the course of a month, depending on the type of curtain you choose—and many are known to be risky. And if you take a swig of water, you could be sipping chemicals that leach from your plastic grab-and-go bottle, some of which are believed to mimic or interfere with your hormones.

Does any of this matter? Scientists aren't sure. In animal studies, some of these chemicals create big problems, decreasing fertility, interfering with neurological development, or even causing cancer—and that's just a partial

list of the unlovely effects researchers have seen. That doesn't mean the chemicals act the same way in humans, but the findings are enough to make some researchers wary. "It's better to be on the safe side," says Kathleen Arcaro, PhD, an environmental toxicologist at the University of Massachusetts in Amherst, who recently found suspected carcinogens called perfluorochemicals (used in stain-resistant fabrics, nonstick cookware, and myriad other products) in the breast milk of nursing mothers.

More studies are badly needed. But in the meantime, we went to leading researchers and consumer advocates to compile a thorough list of the everyday items that might be doing you wrong—and the easy alternatives that are free of worrisome chemicals. Here's what to consider tossing and why, and the safer choices that will help you (and the planet) stay healthy.

GREEN THIS Antimicrobial soap

TO THAT Regular bar or liquid soap

A bacteria-blasting claim may sound good, but studies show that antimicrobial soaps are no better at keeping your hands germ free than the regular kind. In fact, they may even put your health at risk by wreaking havoc on the environment at the microscopic level: Research suggests that triclosan—the bacteria-killing ingredient in liquid soaps—can promote antibiotic resistance in bacteria, says Allison Aiello, PhD, an assistant professor of epidemiology at the University of Michigan School of Public Health. A related compound found in antimicrobial bar soaps, called triclocarban, may create similar problems. You may have to look hard to find a liquid soap that doesn't contain triclosan—a 2001 study found that 76% of brands were antimicrobial. Look for soaps that don't make a bacteria-fighting claim. Or for quick cleanups, use an alcohol-based hand sanitizer, which can kill germs without contributing to antibiotic resistance.

GREEN THIS Conventionally grown peaches, apples, strawberries, celery, and bell peppers

TO THAT Organic versions of these fruits and vegetables

These kinds of produce are among the most likely to carry pesticides to your table, according to a ranking by the EWG, based on nearly 43,000 spot-checks conducted by the USDA and the FDA. It's hard to clean pesticides off soft, thin-skinned fruits and vegetables, points out Jennifer

Powers, spokesperson for the Natural Resources Defense Council (NRDC), an environmental action group. Tip: The sticker on a piece of produce tells you if it was grown organically. Look for a 5-digit number beginning with 9 (just 4 digits means the produce was conventionally grown).

GREEN THIS Nonstick pans

TO THAT Cast-iron pans or other easy-to-clean options

To create a surface slick enough to let food slide off, manufacturers use chemicals called fluoropolymers—which are released into the air if you cook at a high heat, showed tests commissioned by the EWG in 2003. In your body, they

FLIP YOUR GREEN SWITCH

If every home in the United States replaced one incandescent bulb with a compact fluorescent lightbulb (CFL), it would prevent the emission of as much greenhouse gases as produced by 800,000 cars in 1 year. And if you made that switch, you'd save some cash, too.

The downside: Each CFL contains 4 mg of mercury, a potent neurotoxin. If one breaks inside your home, follow the EPA's step-by-step instructions on how to clean up safely—scooping up the mercury without touching it, for instance. (Go to prevention.com/links for more.) You also need to keep the bulbs out of landfills. When one finally burns out, check out *earth911.org* for retailers that accept returns or hazardous waste disposal sites that take CFLs.



break down into compounds such as perfluorooctanoic acid (PFOA), a likely human carcinogen, according to an EPA advisory panel. You can limit your exposure by cooking only on low or medium heat, but some researchers replace their cookware instead. Arcaro uses a cast-iron pan, which has a natural nonstick surface once it's been seasoned. (Lodge Manufacturing Company makes preseasoned ones: lodgemfg.com.) Other options: GreenPan with Thermolon, made with nonstick ceramics (hsn.com), and Le Creuset pans, cast-iron with an enameled cooking surface (lecreuset.com/usa/products for purchasing options).

GREEN THIS Microwave popcorn

TO THAT Stove top popcorn

Open a hot bag of microwave popcorn, take a good sniff—and inhale PFOA in the vapor, according to a study by Kurunthachalam Kannan, PhD, a pro-

fessor in the school of public health at SUNY Albany. The levels in his study were high enough to be a health concern if you get up close and take a few deep breaths, Kannan says—so don't do that. To lower your risk further, pop the old-fashioned way: on the stove top. Coat the bottom of a pot with oil (canola's a good choice), add kernels, cover, and shake.

GREEN THIS Supermarket flea collars for pets

TO THAT "Spot-on" treatments such as Frontline and Advantage

Many store-bought flea collars contain "some of the most hazardous pesticides that are still permitted in residential use," says Miriam Rotkin-Ellman, MPH, of the NRDC. Organophosphate or carbamate pesticides used in these flea collars work by blocking the breakdown of an essential chemical messenger in the flea's nervous system. Unfortunately, the human nervous system depends on

the same chemical, so high doses can be dangerous to you, too (and even riskier for children). In contrast, “spot-on” treatments that you drip between your pet’s shoulders target nervous system chemicals that mammals don’t have, says Steven Hansen, DVM, DABVT, a veterinary toxicologist and director of the ASPCA’s Animal Poison Control Center. Some also include methoprene, a growth inhibitor that keeps flea eggs from hatching but has no known effect on humans.

GREEN THIS All-purpose cleaners with bleach or ammonia

TO THAT Cleaners certified by independent organizations such as Green Seal or EcoLogo

Bleach and ammonia are powerful cleaners, but both can irritate your eyes and lungs (and if you accidentally combine them, they’ll create a corrosive gas). Other ingredients commonly found in cleaners, such as terpenes, are dicey, too: On a smoggy day, terpenes can combine with the ozone in the air to produce formaldehyde, according to a study funded by the California Office of Environmental Hazard Assessment. “It’s prudent to avoid the use of cleaning products that contain terpenes during periods when ozone levels are high,” says study coauthor Charles Weschler, PhD, of Rutgers University. Because many cleaning product ingredients aren’t listed on the label, the easiest way to stay safe is to take advantage of independent testing done by reliable, science-based groups. Look for the Green Seal or EcoLogo; both use clear, stringent standards to vet products (see “4 Eco-Seals You Can Trust” at right).



Products with those stamps of approval aren’t necessarily more expensive. They include the Office Depot Green All-Purpose Cleaner (Green Seal certified) and Greener Choice (EcoLogo approved).

GREEN THIS Canned pasta sauce

TO THAT Fresh or jarred sauce

The slick lining found in most cans contains a chemical called bisphenol-A (BPA)—which is especially likely to leach into acidic foods such as tomatoes or tomato sauce, says Frederick vom Saal, PhD, who studies BPA at the University of Missouri. BPA is believed to be an endocrine disruptor: In animal studies, it interferes with the normal workings of hormones, causing breast tumors, prostate damage, and other ill effects. Levels in cans are typically low, and according to the Can Manufacturers Institute, a trade association, they’re “well below exposure safety limits set by government bodies worldwide.” But by shopping for jars instead of cans when it comes

to high-acid foods like pasta sauce, you get convenience without the worry. Cut your intake further by sticking to tuna canned in water instead of oil—BPA is fat soluble, so it builds up in the oil.

GREEN THIS Sports bottles made of hard, transparent plastic

TO THAT An aluminum or stainless-steel sports bottle

If your clear plastic bottle doesn't give when you squeeze, it's almost certainly made of a material called polycarbonate—which contains BPA, says researcher vom Saal. Single-use water bottles are generally made from a safer plastic: polyethylene terephthalate (PETE or PET), designated by a number 1 in the recycling sign found on the bottle's bottom. However, these bottles can leach other chemicals, called phthalates, which are also thought to be endocrine disruptors. The best option: Get your water from the tap—and if you want to take it with you, put it into a metal sports bottle or one made of BPA-free plastic.

GREEN THIS Vinyl (PVC) shower curtains

TO THAT PVC-free plastic shower curtains, or ones made of nylon, cotton, bamboo, or hemp

Vinyl shower curtains are widely sold. But a recent study by the nonprofit Center for Health, Environment & Justice tested a small sample of these curtains and found that in the 28 days after hanging they released 108 chemicals, some of which are hazardous—such as toluene and phenol (which is known to cause liver and kidney damage in much higher concentrations). A 2002 study

by EPA scientists also found that vinyl shower curtains could emit phenol for more than a month. Fortunately, it's easier than ever to find alternatives. IKEA sells a PVC-free plastic curtain (and no longer carries PVC curtains at all). But cloth or bamboo is eco-friendlier. A hemp curtain requires no liner and is naturally mildew resistant. ■

4 ECO-SEALS YOU CAN TRUST

There are almost 100 different eco-labels in the United States—but some are doled out using mysterious criteria, while others are based on just a few factors and may be given to a product that harms the environment in other ways. Here are ones our experts say are trustworthy guides.



EcoLogo: The product is ecologically lightfooted according to an independent analysis of the item's "life cycle," from raw materials to its disposal as waste.



Green Seal: As with EcoLogo, a stringent life-cycle analysis shows the product does little damage to the environment.



USDA organic: Produce was grown without synthetic fertilizers or pesticides.



Energy Star: An appliance meets the energy efficiency guidelines jointly developed by the EPA and Department of Energy.